

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

M/S

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/057, 406 04/08/98 WERENICZ H 94-36-3-US-D

IM22/1214

HB FULLER CO  
3450 LABORE RD  
ST PAUL MN 55110

EXAMINER

AFTERGUT, J

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 12/14/99

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<b>Office Action Summary</b>	Application No. <b>09/057,406</b>	Applicant(s) <b>Werenicz et al</b>
	Examiner <b>Jeff H. Aftergut</b>	Group Art Unit <b>1733</b>

Responsive to communication(s) filed on Nov 4, 1999

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire THREE month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

#### Disposition of Claims

Claim(s) 1-13, 33-36, and 38-46 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) 1-13, 33-36, and 38-46 is/are rejected.

Claim(s) \_\_\_\_\_ is/are objected to.

Claims \_\_\_\_\_ are subject to restriction or election requirement.

#### Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All  Some\*  None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

#### Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 1733

***Claim Rejections - 35 USC § 102/103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 33, 36, and 38 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Boger et al for the same reasons as presented in paper no. 6, paragraph 2.

With regard to applicant's limitation relating to the melted hot melt adhesive, the applicant is advised that the reference suggested that a suitable adhesive material useful in the operation would have included hot melt adhesives, see column 7, lines 30-32. Certainly, one skilled in the art would have expected that a hot melt adhesive would have been applied upon the substrate in a melted state (such is intrinsic in the application of hot melts and is clearly inferred by the name of the adhesive material itself). Additionally, the applicant is advised that one skilled in the art of applying hot melt adhesives would have readily understood that the same would have been applied in a melted state upon the substrate and such is taken as conventional in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the hot melt adhesive upon the substrate in a heated state (melted) using the device of Boger et al to apply a hot melt material as a conformal coating upon a substrate.

Art Unit: 1733

***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 3-6, 8-12, 33, 35-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanftleben et al in view of Boger et al for the same reasons as expressed in paper no. 6, paragraph 4.

5. Claims 2 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 4 further taken with Reyonlds for the same reasons as expressed in paper no. 6, paragraph 5.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 4 further taken with E.P. 295,694 for the same reasons as expressed in paper no. 6, paragraph 6.

***Information Disclosure Statement***

7. The information disclosure statement filed 4-8-98 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

8. PCT '902 listed an article which is not readily available to the examiner. It is requested that applicant supply the same.

Art Unit: 1733

***Response to Amendment***

9. The declaration under 37 CFR 1.132 filed 11-4-99 is insufficient to overcome the rejection of claims 1-13 and 33-46 based upon the reference to Boger as set forth in the last Office action because: there is no clear nexus between the device tested in the declaration and the device employed by Boger. While the declarant stated that he believed the coating method to be a "Control Coat" operation, a closer examination of the "Control Coat" operation as evidenced by the brochure clearly suggested that the intent of the "Control Coat" operation was to apply a coating of fine fibers of adhesive upon a surface. Boger clearly was not attempting to apply a fine fiber layer but rather expressed a desire to produce a film upon the surface in the process of applying the conformal coating. The declarant is additionally advised that the reference to Boger suggested that one would have employed a HM640 device in the coating operation. The "Control Coat" operation performed by declarant appeared to have been performed with a CC-220 device (not the same device and therefore not the same process). Note that the reference to Boger would have suggested that the application of the hot melt adhesive would have been upon a circuit board and not upon a porous nonwoven as performed by declarant. Additionally, the claims at hand do not recite the application of the coating upon a porous nonwoven in the independent claims and thus the claims are not commensurate in scope with the declaration. The declaration stated that all of the films were observed to have an "open structure", however it is unclear whether the claimed invention excluded such an open structure and additionally what exactly was meant by "open structure".

Art Unit: 1733

***Response to Arguments***

10. Applicant's arguments filed 11-4-99 have been fully considered but they are not persuasive.

As addressed above, the declaration under 35 CFR 1.132 was not persuasive in overcoming the rejection of the prior art of record. Applicant is advised additionally that a declaration under 37 CFR 1.132 cannot be used to overcome a rejection based upon 25 USC 102. Note that one skilled in the art would have been expected to look to Boger as useful techniques for applying conformal coatings upon a substrate. The reference did not expressly state that the hot melt was melted when it was applied, however the application of hot melt adhesives from a die typically included the melting of the adhesive and such was known at the time the invention was made. Additionally, while the reference primarily was concerned with the application of coatings which were conformal and which included epoxies which formed a continuous film as the solvent evaporated, the reference did expressly state that other coating materials like hot melt adhesives would have been useful in the operation, see column 1, lines 64-65, column 7, lines 30-32. The applicant argues that the reference failed to teach the specific viscosity properties as claimed. It should be noted that those claims which Boger was cited against relating to the coating operation and rejected under 35 USC 102/103 alone did not include any limitation relating to the viscosity of the material being coated upon the substrate. The applicant is advised in this regard that the claims are not commensurate in scope with applicant's arguments. Regarding those claims

Art Unit: 1733

which do recite the specific viscosity properties, the reference to Sanftleben et al suggested the specific hot melt coating and the properties of the same which would have been useful in a conformal coating operation wherein one did not need to be concerned with volatile emission. The applicant has not addressed the teachings of Sanftleben et al and therefore it is believed that the applicant agrees with the Office interpretation of the same. It should be noted that Sanftleben et al suggested a non-contact extrusion coating operation for application of the hot melt material upon the substrate, see column 15, lines 55-61. The ordinary artisan would have been expected to practice the coating techniques of Boger et al to apply the coatings of Sanftleben et al in light of the clear suggestion to perform the same.

The applicant argued that the claims were limited to just a slot nozzle in that claim 43 now recited that the coating device consisted essentially of a slot nozzle. The applicant is advised that the reference to Boger taught the use of a slot nozzle. While the reference included the impinging air flow streams in the device, these streams were employed to provide one with the ability to shape the start up and shut off of the coating so that sharp coating would have been provided and good corners. The applicant is advised that it would certainly have been within the purview of the ordinary artisan to eliminate the air streams and the resulting control over the edges of the coatings in the operation of Boger.

Because the applicant has not addressed the teachings of Sanftleben et al, it is believed that the applicant's agree that the reference suggested the use of hot melt coatings for conformal coatings wherein the same had the desired properties relating to the viscosity as claimed.

Art Unit: 1733

Certainly, one would have been motivated to utilize the conventional non-contact coating operation of Boger in the process of Sanftleben et al to apply the hot melt coating upon a circuit board to provide a conformal coating for the same.

*Conclusion*

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shimada '663 and Shimada '819 relate to the conformal coating operation described by Boger and are discussed in Boger.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Application/Control Number: 09/057,406

Page 8

Art Unit: 1733

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Aftergut whose telephone number is (703) 308-2069.

JHA  
December 13, 1999

*Jeff Aftergut*  
**JEFF AFTERGUT**  
**PRIMARY EXAMINER**  
**ART UNIT 1733**